FACT SHEET

TRANSMISSION LINE PREFERRED ROUTE
BOWLING GREEN, KENTUCKY

Evaluation Criteria
TVA uses several tools to evaluate alternative routes for new transmission lines and to identify a preferred route:

- information from property owners, interest groups, elected officials, subject matter experts and others topographic maps
- aerial photography
- Geographic Information System (GIS) constraint maps
- field surveys
- professional experience.

Ultimately, in making the final decision, TVA weighs and balances public input and all pertinent environmental, engineering, and land use considerations. Although individual property owners may feel significantly affected, the objective of the process is to ensure that overall project impacts, as well as impacts to the community at large, are minimized.

Assessment of Alternative Routes
Seventeen route segments were identified for the North Mill project (formerly known as the Greenwood project). Ten alternative route corridors were developed from the segments as shown below and on the attached map.

Alternate route	Segments
1	1A, 4, 8, 10, 15, 16
2	1A, 4, 8, 9, 11, 15, 16
3	1, 3, 5, 8, 10, 15, 16
4	1, 3, 5, 8, 9, 11, 15, 16
5	1, 4, 8, 9, 12, 14, 16
6	1, 3, 5, 8, 9, 12, 14, 16
7	1, 4, 8, 9, 12, 13, 17
8	1, 3, 5, 8, 9, 12, 13, 17
9	1, 3, 6, 7, 17
10	2, 7, 17

Each alternative offers different opportunities and constraints for power line construction. Opportunities include characteristics such as open land, existing utility corridors, areas less suitable for development and lack of sensitive environmental features. Constraints include obstacles such as steep terrain, sensitive environmental areas and land use

conflicts. The assessment of the opportunities and constraints for these 10 alternative routes are summarized in the attached table.

Several of the alternative routes, particularly routes 1-4, have similar opportunities and constraints. Of these four routes, alternatives 3 and 4 are less desirable because they do not share as much existing right-of-way with Warren RECC as alternatives 1 and 2. In addition, alternatives 3 and 4:

- are longer
- require more right-of-way
- impact a greater number of tracts.

By sharing 3 miles of existing right-of-way with Warren RECC, alternatives 1 and 2 avoid new impacts to approximately 27 acres.

Of alternatives 1 and 2, route 2 is preferred because it:

- is shorter
- requires less right-of-way acreage
- impacts less developable land.

Alternatives 5 and 7 share an equal amount of existing right-of-way as alternatives 1 and 2. However, alternative 5 and alternative 7 are less desirable because they:

- are longer
- impact more developable land
- affect more existing residential development
- affect more tracts overall.

In addition, alternative 5 would be significantly more expensive to develop due to:

- the amount of commercial property that would be needed for the right-of-way
- special engineering and design required for construction in the more densely-developed commercial area.

Alternatives 6, 8, 9 and 10 present more constraints and would be significantly more expensive to develop than the other alternatives because they:

- are longer
- require more right-of-way acreage
- do not allow the opportunity to share existing right-of-way
- affect more residences
- affect more tracts overall.

Preferred Route

Alternative 2 (segments 1A, 4, 8, 9, 11, 15 and 16) presents the least amount of constraints and impacts for a transmission line route. As a result, this combination of segments has been identified as TVA's preferred route.

Improvements to the Preferred Route
Alternative route 2 has been modified to further minimize overall project and community impacts. The modifications were based on comments received from property owners, public officials and subject matter experts, along with field surveys and available data sources. TVA's proposed route (see attached map) includes the following adjustments:

- adding segment 1A and extending segment 9 to allow additional sharing of right-of-way with the existing Warren RECC transmission line and to move the transmission line further from an existing wetland
- adjusting segment 11 to eliminate a new stream crossing
- adjusting segments 11, 15 and 16 to reduce the number of parcels crossed by the line (by 10)
- adjusting segments 15 and 16 to minimize impacts to proposed commercial development
- adjusting segment 15 to minimize impacts to developable parcels.

During limited site investigations conducted to date, no impacts have been identified to park lands, archaeological sites, caves, cemeteries, historic areas, historic structures, or sensitive environmental areas.

The alternative route study area is generally characterized by the presence of caves and sinkholes (i.e., karst terrain). TVA has experienced these features in other portions of the service area and it has not proved to be a barrier to transmission line construction. Any problems encountered during construction would be addressed through standard design, Best Management Practice (BMP) techniques, as well as any specific state or federal requirements.

BMP techniques consist of practices and procedures used during construction to minimize impacts to the environment. These measures would also minimize impacts to ground water. However, any effects on ground water should be insignificant and temporary.

Other Possible Adjustments
TVA will conduct a detailed environmental review of the proposed route. During the review, onsite environmental data will be collected and analyzed as part of the decision-making process. This may lead to the further minor modifications of the route to minimize impacts.

More Information
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Assessment of Alternative Routes

Criteria															
Engineering					**Environmental**				**Land Use**						
Route Alternatives	Length of Route - Miles	Road Crossings - Interstate	Road Crossings - US	Transmission Line Crossings	Right-of-Way - Acres	Forest - Acres	New Stream Crossings	Wetlands - Acres	Acres of developable property used	Apartments - 300 ft	Schools - 1200 ft.	Houses - 300 ft.	Barns Within Corridor	Commercial - 300 ft.	Parcels Crossed
1	5.7	1	1	1	41.4	8.7	1	0.0	35.3	22	2	4	1	8	41
2	5.6	1	1	1	38.6	10.6	1	0.0	25.5	22	2	3	1	8	46
3	6.1	1	1	1	62.9	10.5	1	0.0	56.8	22	2	6	1	8	65
4	5.9	1	1	1	60.1	12.5	1	0.0	47.0	22	2	5	1	8	70
5	6.4	1	1	2	34.2	13.1	0	0.3	28.0	22	2	28	1	10	58
6	6.8	1	1	2	55.6	14.9	0	0.3	49.4	22	2	30	1	10	75
7	7.4	1	1	3	45.6	14.3	0	0.3	40.9	11	1	117	1	2	71
8	7.8	1	1	3	67.2	16.1	0	0.3	62.5	11	1	119	1	2	88
9	8.2	1	1	0	99.4	14.1	1	0.0	94.2	11	1	50	1	2	85
10	8.2	1	1	0	98.5	13.7	1	0.0	93.3	11	1	52	0	2	73
Proposed Route (Preferred route with adjustments)															
	6	1	1	1	24.8	1.8	0	0.0	12.7	12*	2	8*	1	13	36

*Efforts to minimize the amount of new right-of-way required would result in closer proximity (within 300 ft. buffer) to some residential and commercial property.